SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Ciprocent Eye/Ear Drops

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Ciprofloxacin Hydrochloride USP equivalent to Ciprofloxacin	0.3% w/v
Preservative:	
Benzalkonium Chloride Solution BP	0.01% w/v
Sterile aqueous vehicle	q.s.

3. PHARMACEUTICAL FORM

Eye/Ear Drops

Clear, colourless to pale yellow solution free from foreign matter.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Ciprocent Eye Drops are indicated for the treatment of,

- Conjunctivitis
- Corneal ulcers
- Hypopyon ulcer
- Superficial and deeper eye infections
- Pre and post-operative care

Ciprocent Ear Drops are indicated for the treatment of chronic suppurative otitis media and mastoiditis.

4.2 Posology and method of administration

The recommended dosage regimen for the treatment of corneal ulcers is two drops of Ciprocent Eye/Ear Drops into the affected eye every 15 minutes for the first six hours and then two drops into the affected eye every 30 minutes for the remainder of the first day. Treatment may be continued after 14 days if corneal re-epithelialization has not occurred.

The recommended dosage regimen for the treatment of bacterial conjunctivitis is one or two drops of Ciprocent Eye/Ear Drops into the conjunctival sac(s) every two hours while awake for two days and one or two drops every four hours while awake for the next five days.

4.3 Contraindications

A history of hypersensitivity to ciprofloxacin or any other component of the medication is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of Ciprocent.

4.4 Special warnings and precautions for use

Warnings

Not recommended for children under one year.

Precautions

As with other antibacterial preparations, prolonged use of Ciprocent may result in overgrowth of non-susceptible organisms, including fungi. If superinfection occurs, appropriate therapy should be initiated. Patients should be advised not to wear contact lenses if they have signs and symptoms of bacterial conjunctivitis.

Serious and occasionally fatal hypersensitivity (anaphylactic) reactions, some following the first dose, have been reported in patients receiving systemic quinolone therapy.

4.5 Interaction with other medicinal products and other forms of interaction

Specific drug interaction studies have not been conducted with ophthalmic Ciprofloxacin. However, the systemic administration of some quinolines has been shown to elevate plasma concentrations of theophylline, interfere with the metabolism of caff ine, enhance the effects

of the oral anticoagulant, warfarin, and its derivatives and has been associated with transient elevations in serum creatinine in patients receiving cyclosporin concomitantly.

4.6 Pregnancy and lactation

There are no adequate and well-controlled studies in pregnant women. Ciprocent should be used during pregnancy only if clearly needed and if the potential benefit justifies the potential risk to the fetus.

It is not known whether topically applied ciprofloxacin is secreted in milk. Therefore, caution should be exercised when Ciprocent is administered to a nursing mother.

4.7 Effects on ability to drive and use machines

There are no known effects of Ciprocent E/E drops on the ability to drive & use machines. It is unlikely to have an effect

4.8 Undesirable effects

The most frequently reported drug related adverse reaction with ciprofloxacin is local burning or discomfort. Other reactions occuring in less than 10% of patients include lid margin crusting, crystals/scales, foreign body sensation, itching, conjunctival hyperemia and taste disturbances following instillation.

4.9 Overdose

A topical overdosage of Ciprofloxacin Hydrochloride Ophthalmic Solution may be flushed from the eye(s) with warm tap water.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Ciprocent contains the potent fluoroquinolone antibacterial ciprofloxacin. It acts by inhibiting bacterial DNA gyrase, so preventing the super-coiling of DNA, a process that is necessary for compacting chromosomes into the bacterial cell. Ciprocent is bactericidal. Ciprofloxacin acts against a wide range of Gram-negative and Gram-positive organisms including Haemophilus influenzae, Pseudomonas aeruginosa, Serratia marcescens, Neisseria gonorrhoea,

Staphylococcus aureus (including methicillin- susceptible and methicil1in-resistant strains), Staphylococcus epidermidis, Streptococcus pneumoniae and other species of Streptococcus.
On topical application of Ciprocent the maximum reported plasma concentration of Ciprofloxacin was less than 5 ng/ml. The mean concentration was usually less than 2.5 ng/ml.

5.2 Pharmacokinetic properties

Ciprofloxacin solution is rapidly absorbed into the eye following topical ocular administration. Systemic levels are low following topical administration. Plasma levels of ciprofloxacin in human subjects following 2 drops of 0.3% ciprofloxacin solution every 2 hours for two days and then every four hours for 5 days ranged from non-quantifiable (<1.0 ng/mL) to 4.7 ng/mL. The mean peak ciprofloxacin plasma level obtained in this study is approximately 450-fold less than that seen following a single oral dose of 250 mg ciprofloxacin. The systemic pharmacokinetic properties of ciprofloxacin have been well studied. Ciprofloxacin widely distributes to tissues of the body. The apparent volume of distribution at steady state is 1.7 to 5.0 l/kg. Serum protein binding is 20-40%. The half-life of ciprofloxacin in serum is 3-5 hours. Both ciprofloxacin and its four primary metabolites are excreted in urine and faeces. Renal clearance accounts for approximately two-thirds of the total serum clearance with biliary and faecal routes accounting for the remaining percentages. In patients with impaired renalhalf-function, the elimination life of ciprofloxacin is only moderately increased due to extrarenal routes of elimination. Similarly, in patients with severely reduced liver function the elimination half-life is only slightly longer.

There are no pharmacokinetic data available in respect of use in children.

5.3 Preclinical safety data

Ciprofloxacin and other quinolones have been shown to cause arthropathy in immature animals of most species tested following oral administration. The degree of cartilage involvement was found to be dependent on age, species and dosage. With 30 mg/kg ciprofloxacin the effect on the joint was minimal.
A one month topical ocular study with ciprofloxacin 3mg/ml eye drops, solution in immature beagle dogs did not demonstrate any articular lesions. Likewise there is no evidence that the ophthalmic dosage form has any effect on the weight bearing points.
Fertility studies conducted in rats at oral doses of ciprofloxacin up to 100 mg/kg did not reveal any evidence of impairment.
Repeated-dose toxicological studies in rats and mice showed no evidence of tumorigenicity or carcinogenicity.

No carcinogenic or tumorigenic effects due to ciprofloxacin were observed during long-term carcinogenicity studies employing daily oral doses up to 250 and 750 mg/kg to rats and mice, respectively.
Animal studies revealed no embryotoxic or teratogenic effect. However, gastrointestinal disturbances resulting in maternal weight loss in rabbits and an increased incidence of abortion were observed.
The mutagenic potential of ciprofloxacin has been studied using eight *in vitro* and three *in vivo* investigations. Six in vitro tests were negative while two were positive. However, the results of the three *in vivo* tests were negative. Thus there is no reason to suspect that ciprofloxacin has a mutagenic potential.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Boric Acid ,Starch, Disodium Edetate, Sodium Chloride, Polyoxyl 40 Hydrogenated Caster oil (Cremophor RH 40), Glycerine, Water for Injection.

6.2 Incompatibilities

None.

6.3 Shelf life

Three years from the date of manufacture.

6.4 Special precautions for storage

Store at temperature between 15-30 °C in a dark place. Do not freeze

6.5 Nature and contents of container

Plastic dropper bottle of 5ml.

6.6 Special precautions for disposal and other handling

Any unused product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Centaur Pharmaceuticals Pvt. Ltd.

8. MARKETING AUTHORISATION NUMBER(S)

05833/07257/REN/2020

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Apr 5, 2021

10. DATE OF REVISION OF THE TEXT

July 2019.